

REMARKS/ARGUMENTS

Upon entry of the instant amendment, claims 1-24 are pending. Claim 13 has been amended to more particularly point out the Applicant's invention. In addition, a Request for Continued Examination pursuant to 37 C.F.R. §1.114 is enclosed herewith along with a Petition to Extend Time. The Examiner is respectfully requested to reconsider and withdraw the rejections based on the instant amendment and the remarks below.

Claim Rejections – 35 U.S.C. §102:

Claims 13 and 19 have been rejected under 35 U.S.C. §102(b) as being anticipated by *Ping* U.S. patent no. 5,616,519. In order for there to be anticipation each and every one of the elements must be found in a single reference. It is respectfully submitted that claim 13 and claim 19, which depends on claim 13, recite elements clearly not disclosed or suggested by the *Ping* patent. In particular, claim 13, as amended, and thus claim 19, which depends on claim 13, recite that the pillars are coated with a low dielectric polymer. As discussed in the response to the previous Official Action, mailed on April 21, 2003, the low dielectric polymer on the pillars results in lower capacitive coupling and thus increased propagation speed of the device. The *Ping* patent teaches coating the pillars with a spin on glass (SOG). As is known in the art, SOG has a relatively high dielectric constant. As such, the use of SOG between the metal layers results in a relatively high capacitance coupling thus lowering the propagation speed of the device. Thus, not only does the *Ping* patent not anticipate claims 13 and 19, but it actually teaches away from the invention recited in those claims.

Claim Rejections – 35 U.S.C. §103:

Claims 1, 4, 5 and 7 have been rejected under 35 U.S.C. §103(a) as being unpatentable over *Kano* U.S. patent no. 5,380,679 in view of *Lin* U.S. patent no. 5,929,525. It is respectfully submitted that neither the *Lin* nor the *Kano* patents disclose or suggest the invention recited in the claims at issue. In particular, claim 1 as well as claims 4, 5 and 7, which depend on claim 1,

recite a process for forming one or more pillars from a photoresist which are coated with a low dielectric polymer. The Applicant agrees that the *Kano* patent fails to teach coating of the plated pillars. Paragraph 5 states that the *Lin* patent discloses “Coating said one or more metal pillars with a silicon based dielectric polymer (14)”, identified in column 4 of the *Lin* patent, line 26 *et seq.*, as SOG. As mentioned above, SOG has a relatively high dielectric value and thus increases the capacitance and decreases the performance of the device. For these reasons and the previous reasons above, the Examiner is respectfully requested to reconsider and withdraw this rejection.

Claims 2, 6, 8 and 9 have been rejected under 35 U.S.C. §103(a) as being unpatentable over the *Lin* and *Kano* patents and further in view of the Applicant’s admitted prior art. Claim 3 has been rejected under 35 U.S.C. §103(a) as being unpatentable over the *Lin* and *Kano* patents and further in view of *Sonego et al.* U.S. patent no. 6,239,042. Claims 10 and 11 have been rejected under 35 U.S.C. §103(a) as being unpatentable over *Lin* and *Kano* and further in view of *Furukawa et al.* U.S. patent no. 6,387,783. Claim 12 has been rejected under 35 U.S.C. §103(a) as being unpatentable over the *Lin*, *Kano* and *Furukawa et al.* patents further in view of *Samoto* U.S. patent no. 5,583,063. Claims 14 and 15 have been rejected under 35 U.S.C. §103(a) as being unpatentable over the *Ping* patent in view of the *Lin* patent. Claim 16 has been rejected under 35 U.S.C. §103(a) as being unpatentable over the *Ping* patent in view of the *Kano* and *Lin* patents.¹ Claims 17, 20 and 21 have been rejected under 35 U.S.C. §103(a) as being unpatentable over the *Ping* patent further in view of the Applicant’s admitted prior art. Claim 18 has been rejected under 35 U.S.C. §103(a) as being unpatentable over the *Ping* patent in view of the *Sonego et al.* patent. Claims 22 and 23 have been rejected over the *Ping* patent in view of the *Furukawa et al.* patent. Finally, claim 24 has been rejected as being unpatentable over the *Ping*

¹ The rejection specifically states “Claim 16 is rejected under 35 U.S.C. §103(a) as being unpatentable over *Ping* (‘519) in view of *Kano* (‘Lin) as applied to claims 14 and 15 above, and further in view of the Applicant’s prior art.”. The Applicant assumes that claim 16 is being rejected as being unpatentable over *Ping*, *Kano*, *Lin* and the Applicant’s admitted prior art.

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patent in view of the *Furukawa et al.* patent and further in view of the *Samoto* patent. The Applicant respectfully incorporates all of the arguments submitted in the response to the last Official Action including those arguments relating to the lack of *prima facie* case of obviousness. Based on those arguments and the arguments presented above, the Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of the claims.

Respectfully submitted,

KATTEN MUCHIN ZAVIS ROSENMAN

By:


John S. Paniaguas
Registration No. 31,051
Attorney for Applicant(s)

Katten Muchin Zavis Rosenman
525 W. Monroe Street
Suite 1600
Chicago, Illinois 60661-3693
(312) 902-5312
(312) 577-4532
Customer No.: 27160